

§ 148.400

immediately above the zinc material. If an increase in temperature is detected, the mechanical ventilation system required by paragraph (d) of this section must be used until the temperature of the zinc material is below 55 °C (131 °F).

(4) Except as provided in paragraph (e)(5) of this section, the cargo hatches of holds containing zinc material must remain sealed to prevent the entry of seawater.

(5) If the concentration of hydrogen is near 4.1 percent by volume and increasing, despite ventilation, or the temperature of the zinc material reaches 65 °C (150 °F), the cargo hatches should be opened provided that weather and sea conditions are favorable. When hatches are opened take care to prevent sparks and minimize the entry of water.

Subpart F—Additional Special Requirements

§ 148.400 Applicability.

Unless stated otherwise, the requirements of this subpart apply only to the shipment or loading of materials, listed in Table 148.10 of this part, for which Table 148.10 contains a reference to a section or paragraph of this subpart.

§ 148.405 Sources of ignition.

(a) Except in an emergency, no welding, burning, cutting, chipping, or other operations involving the use of fire, open flame, sparks, or arc-producing equipment, may be performed in a cargo hold containing a Table 148.10 material or in an adjacent space.

(b) A cargo hold or adjacent space must not have any flammable gas concentrations over 10 percent of the LFL before the master may approve operations involving the use of fire, open flame, or spark- or arc-producing equipment in that hold or adjacent space.

§ 148.407 Smoking.

When Table 148.10 of this part associates a material with a reference to this section, and that material is being loaded or unloaded, smoking is prohibited anywhere on the weatherdeck of the vessel. While such a material is on board the vessel, smoking is prohibited

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in spaces adjacent to the cargo hold and on the vessel's deck in the vicinity of cargo hatches, ventilator outlets, and other accesses to the hold containing the material. "NO SMOKING" signs must be displayed in conspicuous locations in the areas where smoking is prohibited.

§ 148.410 Fire hoses.

When Table 148.10 of this part associates a material with a reference to this section, a fire hose must be available at each hatch through which the material is being loaded.

§ 148.415 Toxic gas analyzers.

When Table 148.10 of this part associates a material with a reference to a paragraph in this section, each vessel transporting the material, other than an unmanned barge, must have on board a gas analyzer appropriate for the toxic gas listed in that paragraph. At least two members of the crew must be knowledgeable in the use of the equipment. The equipment must be maintained in a condition ready for use and calibrated according to the instructions of its manufacturer. The atmosphere in the cargo hold and adjacent spaces must be tested before a person is allowed to enter these spaces. If toxic gases are detected, the space must be ventilated and retested before entry. The toxic gases for which the requirements of this section must be met are:

- (a) Arsine;
- (b) Carbon monoxide;
- (c) Hydrogen cyanide;
- (d) Hydrogen sulfide;
- (e) Phosphine; and
- (f) Sulfur dioxide.

§ 148.420 Flammable gas analyzers.

When Table 148.10 of this part associates a material with a reference to a paragraph in this section, each vessel transporting the material, other than an unmanned barge, must have on board a gas analyzer appropriate for the flammable gas listed in that paragraph. At least two members of the crew must be knowledgeable in the use of the equipment. The equipment must be maintained in a condition ready for use, capable of measuring 0 to 100 percent LFL for the gas indicated, and